Title: MOLECULES WITH EXTENDED HALF-LIVES, COMPOSITIONS AND USES THEREOF

I rs: W. Dall'Acqua et al.
Appl. No. 10/020,354

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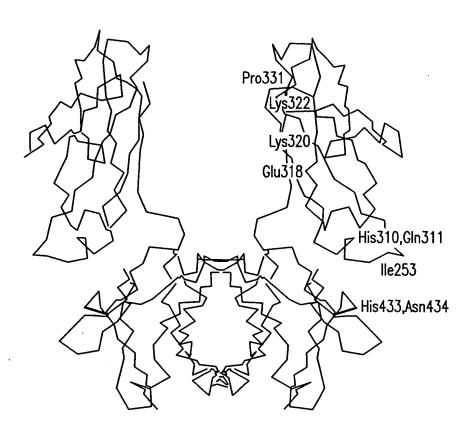


FIG.1

Glu Pro Lys	_	s Asp Ly Hinge					Pro	Pro	Cys	Pro	[ু] Ala
Pro Glu Leu							Phe	Pro	Pro 30	Lys	Pro
Lys Asp Thr 35	Leu Me	: Ile Se	r Arg 40	Thr	Pro	Glu	Val	Thr 45	Cys	Val	Val
Val Asp Val 50	Ser Hi	Glu As 55	•	Glu	Val	Lys	Phe 60		Trp	•	
Asp Gly Val	Glu Va	His As 70	n Ala	Lys	Thr	Lys 75	Pro				
Tyr Asn Ser	Thr Ty	Arg Va	1 Val	Ser	Va1 90	Leu	Thr	Val	Leu	His 95	Gln
Asp Trp Leu	Asn Gl	/ Lys Gl	u Tyr	Lys 105	Cys	Lys	Val	Ser	Asn 110	Lys	Ala
Leu Pro Ala 115	Pro Il	e Glu Ly	s Thr 120	Ile	Ser	Lys	Ala	Lys 125	G1y	G1n	Pro
Arg Glu Pro 130	G1n Va	l Tyr Th 13	r Leu	Pro	Pro	Ser	Arg 140	G1u	G1u	Met	Thr
Lys Asn Gln 145	Val Se	150	r Cys			155					160
Asp Ile Ala	Val Glu 16	ı Trp G1									
Lys Thr Thr	Pro Pro 180	Val Le	u Asp	Ser 185	Asp	Gly	Ser	Phe	Phe 190	Leu	Tyr
Ser Lys Leu 195	Thr Va	l Asp Ly	s Ser 200	_	Trp	Gln	Gln	G1 y 205	Asn	Val	Phe
Ser Cys Ser 210	Val Me	His Gl 21		Leu	His	Asn	His 220	Tyr	Thr	Gln	Lys
Ser Leu Ser 225	Leu Se	Pro G1 230	y Lys	 I							

FIG.2

Met Gly Val Pro Arg Pro Gln Pro Trp Ala Leu Gly Leu Leu Phe Leu Leu Pro Gly Ser Leu Gly Ala Glu Ser His Leu Ser Leu Leu Tyr 25 His Leu Thr Ala Val Ser Ser Pro Ala Pro Gly Thr Pro Ala Phe Trp Val Ser Gly Trp Leu Gly Pro Gln Gln Tyr Leu Ser Tyr Asn Ser Leu Arg Gly Glu Ala Glu Pro Cys Gly Ala Trp Val Trp Glu Asn Gln Val Ser Trp Tyr Trp Glu Lys Glu Thr Thr Asp Leu Arg Ile Lys Glu Lys Leu Phe Leu Glu Ala Phe Lys Ala Leu Gly Gly Lys Gly Pro Tyr Thr 105 Leu Gln Gly Leu Leu Gly Cys Glu Leu Gly Pro Asp Asn Thr Ser Val 120 Pro Thr Ala Lys Phe Ala Leu Asn Gly Glu Glu Phe Met Asn Phe Asp Leu Lys Gln Gly Thr Trp Gly Gly Asp Trp Pro Glu Ala Leu Ala Ile 150 155 Ser Gln Arg Trp Gln Gln Gln Asp Lys Ala Ala Asn Lys Glu Leu Thr 170 165 Phe Leu Leu Phe Ser Cys Pro His Arg Leu Arg Glu His Leu Glu Arg 185 Gly Arg Gly Asn Leu Glu Trp Lys Glu Pro Pro Ser Met Atg Leu Lys 200 205 Ala Arg Pro Ser Ser Pro Gly Phe Ser Val Leu Thr Cys Ser Ala Phe 215 220 Ser Phe Tyr Pro Pro Glu Leu Gln Leu Arg Phe Leu Arg Asn Gly Leu 230 235 240 Ala Ala Gly Thr Gly Gln Gly Asp Phe Gly Pro Asn Ser Asp Gly Ser Phe His Ala Ser Ser Ser Leu Thr Val Lys Ser Gly Asp Glu His His 265 Tyr Cys Cys Ile Val Gln His Ala Gly Leu Ala Gln Pro Leu Arg Val Glu Leu Glu Ser Pro Ala Lys Ser Ser Val Leu Val Val Gly Ile Val 295 300 Ile Gly Val Leu Leu Leu Thr Ala Ala Ala Val Gly Gly Ala Leu Leu 310 315 320 Trp Arg Arg Met Arg Ser Gly Leu Pro Ala Pro Trp Ile Ser Leu Arg 325 330 Gly Asp Asp Thr Gly Val Leu Leu Pro Thr Pro Gly Glu Ala Gln Asp 345 Ala Asp Leu Lys Asp Val Asn Val Ile Pro Ala Thr Ala 355 360 365

Met Gly Met Pro Leu Pro Trp Ala Leu Ser Leu Leu Leu Val Leu Leu Pro Gln Thr Trp Gly Ser Glu Thr Arg Pro Pro Leu Met Tyr His Leu Thr Ala Val Ser Asn Pro Ser Thr Gly Leu Pro Ser Phe Trp Ala Thr Gly Trp Leu Gly Pro Gln Gln Tyr Leu Thr Tyr Asn Ser Leu Arg Gln Glu Ala Asp Pro Cys Gly Ala Trp Val Trp Glu Asn Gln Val Ser Trp Tyr Trp Glu Lys Glu Thr Thr Asp Leu Lys Ser Lys Glu Gln Leu Phe Leu Glu Ala Leu Lys Thr Leu Glu Lys Ile Leu Asn Gly Thr Tyr Thr Leu Gln Gly Leu Leu Gly Cys Glu Leu Ala Ser Asp Asn Ser Ser Val 120 Pro Thr Ala Val Phe Ala Leu Asn Gly Glu Glu Phe Met Lys Phe Asn 135 140 Pro Arg Ile Gly Asn Trp Thr Gly Glu Trp Pro Glu Thr Glu Ile Val 155 150 Ala Asn Leu Trp Met Lys Gln Pro Asp Ala Ala Arg Lys Glu Ser Glu 165 170 Phe Leu Leu Asn Ser Cys Pro Glu Arg Leu Leu Gly His Leu Glu Arg Gly Arg Arg Asn Leu Glu Trp Lys Glu Pro Pro Ser Met Arg Leu Lys 200 205 Ala Arg Pro Gly Asn Ser Gly Ser Ser Val Leu Thr Cys Ala Ala Phe Ser Phe Tyr Pro Pro Glu Leu Lys Phe Arg Phe Leu Arg Asn Gly Leu 235 230 240 Ala Ser Gly Ser Gly Asn Cys Ser Thr Gly Pro Asn Gly Asp Gly Ser Phe His Ala Trp Ser Leu Leu Glu Val Lys Arg Gly Asp Glu His His 265 Tyr Gln Cys Gln Val Glu His Glu Gly Leu Ala Gln Pro Leu Thr Val Asp Leu Asp Ser Ser Ala Arg Ser Ser Val Pro Val Val Gly Ile Val 295 300 Leu Gly Leu Leu Leu Val Val Ala Ile Ala Gly Gly Val Leu Leu 310 315 320 Trp Gly Arg Met Arg Ser Gly Leu Pro Ala Pro Trp Leu Ser Leu Ser 325 330 Gly Asp Asp Ser Gly Asp Leu Leu Pro Gly Gly Asn Leu Pro Pro Glu 345 Ala Glu Pro Gln Gly Ala Asn Ala Phe Pro Ala Thr Ser 355 360 365

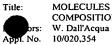


Glu 1	Pro	Lys			Asp Hinge									Pro 15	Ala
Pro	G1u	Leu	Leu 20	Gly	Gly	Pro	Ser	Va1 25	Phe	Leu	Phe	Pro	Pro 30	Lys	Pro
Lys	Asp	Thr 40	Leu	Met	Ile	Ser	Arg 45	<u>Thr</u>	Pro	Glu	Val	Thr 50	Cys	Val	Val
Val	Asp 50	Val	Ser	His	Glu	Asp 55	Pro	Glu	Val	Lys	60		•		Val
Asp 65	Gly	Val	Glu	Val	<u>His</u> 70	Asn	Ala	Lys	Thr	<u>Lys</u> 75					
Tyr	Asn	Ser	Thr	Tyr 85	Arg	Val	Val	Ser	Va1 90	Leu	Thr	Val	Leu	<u>His</u> 95	<u>G1n</u>
Asp	Trp	Leu	Asn 100	Gly	Lys	Glu	Tyr	Lys 105	Cys	Lys	Val	Ser	Asn 110	Lys	Ala
Leu	Pro	Ala 115	Pro		G1u								Gly	G1n	Pro
Arg	Glu 130	Pro	Gln		Tyr							Į.	Glu	Met	Thr
Lys 145	Asn	Gln	Val	Ser	Leu 150	Thr	Cys	Leu	Val	Lys 155	Gly	Phe	Tyr	Pro	160
Asp	Ile	Ala	Val	Glu 165	Trp	G1u	Ser	Asn	<u>Gly</u> 170	G1n	Pro	Glu	Asn	-	
Lys	Thr	Thr	Pro 180	Pro	Val	Leu	Asp	Ser 185	Asp	Gly	Ser	Phe	Phe 190	Leu	Tyr
Ser	Lys	Leu 195	Thr	Val	Asp	Lys	Ser 200	Arg	Trp	Gln	Gln	Gly 205	Asn	Val	Phe
Ser	Cys 210	Ser	Val	Met	His	Glu 215	Ala	Leu	His	Asn	His 220	Tyr	Thr	Gln	Lys
Ser 225	Leu	Ser	Leu	Ser	Pro 230	G1y	Lys						• • • •		
						- -									

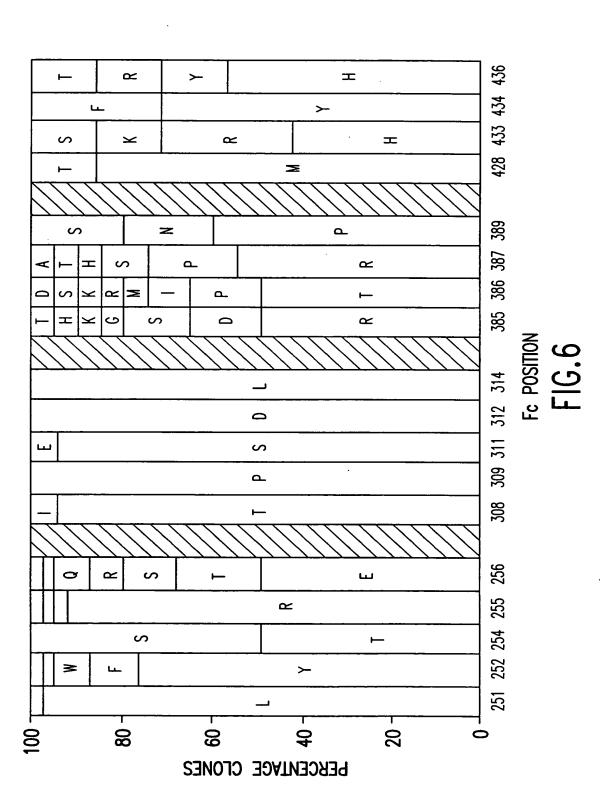
FIG.4

MOLECULES WITH EXTENDED HALF-LIVES, COMPOSITIONS AND USES THEREOF W. Dall'Acqua et al. 10/020,354 'entors: Appl. No. 6/11 ELUTION AT pH 7.2 $\mathsf{G}_3\mathsf{P}$ M13

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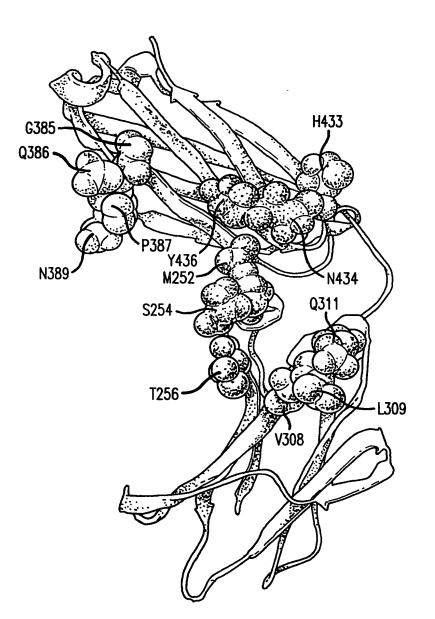


FIG.9



